

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. **HSJ920040056US1**  
First Inventor **Matthew J. Carey**  
Title **CURRENT-PERPENDICULAR-TO-PLANE MAGNETORESISTIVE SENSOR WITH FREE LAYER STABILIZED BY IN-STACK ORTHOGONAL MAGNETIC COUPLING**  
Express Mail Label No. **ER 265251618 US**

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages **24**]  
(preferred arrangement set forth below)
- Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets **6**]
5. Oath or Declaration [Total Pages **3**]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO: Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☒ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_ / \_\_\_\_\_

Prior application information:

Examiner: \_\_\_\_\_

Group Art Unit: \_\_\_\_\_

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**

☐ Customer Number or Bar Code Label

(Insert Customer No. or Attach bar code label here)

or ☒ Correspondence address below

Name **Thomas R. Berthold**

Address **18938 Congress Junction Ct.**

City **Saratoga** State **CA** Zip Code **95070**

Country **USA** Telephone **(408) 396-8411** Fax **(408) 904-6605**

Name (Print/Type) **Lewis L. Nunnelley** Registration No. (Attorney/Agent) **42,942**

Signature *[Signature]* Date **3/16/04**

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PTO/SB/17 (10-01)

Approved for use through 07/31/2006. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

# FEE TRANSMITTAL for FY 2004

Patent fees are subject to annual revision.

## Complete if Known

Application Number	
Filing Date	
First Named Inventor	Matthew J. Carey
Examiner Name	
Group Art Unit	
Attorney Docket No.	HSJ920040056US1

TOTAL AMOUNT OF PAYMENT (\$) 1188.00

## METHOD OF PAYMENT

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit Account Number: 502587  
Deposit Account Name: Hitachi Global Storage Technologies

- ☒ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17  
☐ Applicant claims small entity status. See 37 CFR 1.27

2. ☐ Payment Enclosed:

☐ Check ☐ Credit card ☐ Money Order ☐ Other

## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity	Small Entity	Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1001	770	2001	385			Utility filing fee	770.00
1002	340	2002	170			Design filing fee	
1003	530	2003	265			Plant filing fee	
1004	770	2004	385			Reissue filing fee	
1005	160	2005	80			Provisional filing fee	

SUBTOTAL (1) (\$) 770.00

### 2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
41	-20** = 21	18.00	378.00
3	-3** = 0	86.00	0.00
Multiple Dependent			

Large Entity	Small Entity	Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description
1202	18	2202	9			Claims in excess of 20
1201	86	2201	43			Independent claims in excess of 3
1203	290	2203	145			Multiple dependent claim, if not paid
1204	86	2204	43			** Reissue independent claims over original patent
1205	18	2205	9			** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$) 378.00

\*\*or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

### 3. ADDITIONAL FEES

Large Entity	Small Entity	Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	205	65			Surcharge - late filing fee or oath	
1052	50	227	25			Surcharge - late provisional filing fee or cover sheet	
1053	130	139	130			Non-English specification	
1812	2,520	147	2,520			For filing a request for <i>ex parte</i> reexamination	
1804	920*	112	920*			Requesting publication of SIR prior to Examiner action	
1805	1,840*	113	1,840*			Requesting publication of SIR after Examiner action	
1251	110	215	55			Extension for reply within first month	
1252	420	216	205			Extension for reply within second month	
1253	950	217	465			Extension for reply within third month	
1254	1,480	218	725			Extension for reply within fourth month	
1255	2,010	228	985			Extension for reply within fifth month	
1401	330	219	160			Notice of Appeal	
1402	330	220	160			Filing a brief in support of an appeal	
1403	290	221	140			Request for oral hearing	
1451	1,510	138	1,510			Petition to institute a public use proceeding	
1452	110	240	55			Petition to revive - unavoidable	
1453	1,330	241	650			Petition to revive - unintentional	
1501	1,330	242	650			Utility issue fee (or reissue)	
1502	480	243	235			Design issue fee	
1503	640	244	310			Plant issue fee	
1460	130	122	130			Petitions to the Commissioner	
1807	50	123	50			Processing fee under 37 CFR 1.17(q)	
1806	180	126	180			Submission of Information Disclosure Stmt	
8021	40	581	40			Recording each patent assignment per property (times number of properties)	40
1809	770	246	370			Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	249	370			For each additional invention to be examined (37 CFR § 1.129(b))	
1801	770	279	375			Request for Continued Examination (RCE)	
1802	900	169	900			Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) 40.00

## SUBMITTED BY

Name (Print/Type)	Lewis L. Nunnelley	Registration No. (Attorney/Agent)	42,942	Telephone	(408) 717-6570
Signature		Date	3/16/04		

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of :  
Matthew J. Carey et al. : Group Art Unit: Not Yet Assigned  
Serial No. Not Yet Assigned : Examiner: Not Yet Assigned

For: "Current-Perpendicular-To-Plane Magnetoresistive Sensor With Free Layer  
Stabilized By In-Stack Orthogonal Magnetic Coupling"

Assistant Commissioner of Patents and Trademarks  
Alexandria, VA 22313-1450

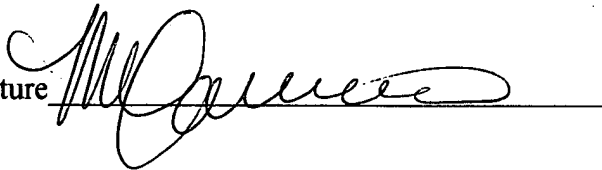
EXPRESS MAIL CERTIFICATE

I hereby certify that the above paper/fee is being deposited with the United States Postal Service  
as \_Express Mail Post Office to Addressee\_ service in an envelope addressed to the Assistant  
Commissioner for Patents and Trademarks, Alexandria, VA 22313-1450 on March 16, 2004.

Express Mail NO.: ER 265251618 US

Person mailing paper/fee: Mary Lou Domenici

Signature

A handwritten signature in cursive script, appearing to read "Mary Lou Domenici", written over a horizontal line.